

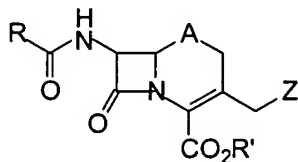
### REMARKS

By the present communication claims 1-4 have been amended to more particularly define Applicants' invention. As amended, the claims are supported by the specification and the original claims and add no new matter. Claims 1-16 are pending.

Regarding the objection to Fig. 7, the present amendment includes a replacement figure (attached hereto as Exhibit A) wherein the first word in the figure is capitalized. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

#### A. Rejection Under 35 U.S.C. § 102(b)

The rejection of claim 1 under 35 U.S.C. § 102(b) as allegedly being anticipated by Quante, et. al., 9U.S. Patent no. 5,338,843, is respectfully traversed. Applicants' invention distinguishes over Quante by requiring a compound having the formula:



(I)

in which R is a benzyl, 2-thienylmethyl, or cyanomethyl group; R' is selected from the group consisting of H, alkyl, physiologically acceptable salts or metal, ammonium cations, --CHR<sub>2</sub>OCO(CH<sub>2</sub>)<sub>n</sub>CH<sub>3</sub>, --CHR<sub>2</sub>OCOC(CH<sub>3</sub>)<sub>3</sub>, in which R<sub>2</sub> is selected from the group consisting of H and lower alkyl, acylthiomethyl, acyloxy-alpha-benzyl, deltabutyrolactonyl, methoxycarbonyloxymethyl, phenyl, methylsulphinylmethyl, β-morpholinoethyl, dialkylaminoethyl, and dialkylaminocarbonyloxymethyl, and n is from 1-4; A is selected from the group consisting of S, O, SO, SO<sub>2</sub> and CH<sub>2</sub>; and Z is a donor fluorescent moiety. Quante does not describe such an invention. In particular, Quante does not describe compounds that contain a donor fluorescent moiety as defined by the

present invention. Thus, Quante does not set forth each and every element of Applicants' invention. Accordingly, reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) are respectfully requested.

**B. Rejection Under 35 U.S.C. § 112, Second Paragraph**

The rejection of claims 1-3 under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, is respectfully traversed.

With specific reference to the term "donor", it is respectfully submitted that this term, as used in claim 1, is clear and unambiguous. Those skilled in the art recognize that the compounds described in claim 1 are fluorogenic substrates for  $\beta$ -lactamase containing fluorescent donor moieties. The phrase "fluorescent donor moiety" is defined in the specification at paragraph [0032]. Specifically, a "fluorescent donor moiety" refers to the radical of a fluorogenic compound which can absorb energy and is capable of transferring the energy to another fluorogenic molecule or part of a compound. In claim 1, Z is such a donor fluorescent moiety. Thus, one skilled in the art, upon review of this definition and the specification in general, would readily understand the term "donor" as this term is used in claim 1.

With specific reference to the variable "n" in claim 1, the rejection is rendered moot since this claim has been amended to explicitly define this variable.

With specific reference to the term "general" in claim 1, the rejection is rendered moot since presently amended claim 1 does not recite this term.

With specific reference to the definition of Y in claim 2, the rejection is rendered moot since "O" is no longer part of the definition for the variable Y.

With specific reference to the phrase “ester groups” as this phrase is used in claim 1 in the definition of R’, the rejection is rendered moot since this phrase no longer appears in claim 1.

With specific reference to structure (VI) in claim 2, the rejection is rendered moot since in presently amended claim 2, the variable R<sub>3</sub> does not appear to the upper right of the structure in a monovalent form.

With specific reference to structure (VII) in claim 2, it is respectfully submitted that no ambiguity exists regarding the abbreviation “Me”. Those skilled in the art would readily acknowledge that this abbreviation stands for “methyl”, and not “metal”. It is respectfully submitted that the conventional abbreviation for “metal” is “M”.

With specific reference to the phrase “ammonium cations”, it is respectfully submitted that this phrase, as used in claim 1, is clear and unambiguous. Those skilled in the art readily recognize that “ammonium cations”, when set forth in the plural, refers to a group of ammonium cations having the structure NR<sub>4</sub><sup>+</sup>, wherein R is –H or alkyl.

With specific reference to the term “acyl”, it is respectfully submitted that this phrase, as used in claim 1, is clear and unambiguous. Those skilled in the art recognize that an acylthiomethyl group has the structure RC(S), wherein R is methyl.

With specific reference to the term “acyloxy-alpha-benzyl”, this term has been re-written in claim 1 to read “alpha-acyloxybenzyl”.

With specific reference to the definition of the linker R<sub>3</sub> in claim 2, it is respectfully submitted that the term “linker” is not indefinite. This term is defined

throughout the specification (see, e.g., page 14, paragraph [0046]). Thus, when claim 2 is construed in view of the specification, those skilled in the art can readily determine the moieties contemplated for use as a "linker".

For all of the reasons set forth above, it is respectfully submitted that the present claims are clear and unambiguous. Accordingly, reconsideration and withdrawal of the rejection of claims 1-3 under 35 U.S.C. 112, second paragraph, are respectfully requested.

**C. Rejections Under 35 U.S.C. § 112, First Paragraph**

The rejection of claim 3 under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention, is respectfully traversed. Applicants respectfully disagree with the Examiner's assertion that the definition for n in claim 3 represents new matter. The definition of "n" in claim 3 refers to the number of methylene units present in the moieties recited in claim 3. When claim 3 is construed in view of the specification, those skilled in the art would readily acknowledge that the number of methylene units together form a lower alkylene unit. Lower alkylene is defined in the specification at page 9, paragraph [0036] as a moiety containing 1-4 carbon atoms. Presently amended claim 3 defines n as ranging from 1-4. Thus, it is submitted that this definition clearly does not include new matter. Accordingly, reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. § 112, first paragraph are respectfully requested.

The rejection of claim 2 under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application

was filed, had possession of the claimed invention, is respectfully traversed. With specific reference to the definitions of X and Y in presently amended claim 2, it is submitted that support for these definitions is explicitly set forth in Fig. 7 of the specification. Accordingly, reconsideration and withdrawal of the rejection of claim 2 under 35 U.S.C. § 112, first paragraph are respectfully requested.

With specific reference to formula (V) in claim 2, it is submitted that presently amended claim 2 presents this structure as a neutral moiety, therefore the rejection regarding the negatively charged structure is rendered moot.

The rejection of claim 4, under 35 U.S.C. 112, first paragraph, as containing subject matter which was allegedly not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, is respectfully traversed. Applicants address this rejection together with the objection to claim 4 under 37 CFR 1.75(c) as allegedly being of improper dependent form.

First, presently amended claim 4 is presented in independent form, thereby rendering moot the objection under 37 CFR 1.75(c). Second, it is respectfully submitted that the compound set forth in claim 4 is fully supported by the present specification. For example, the compound in question is described in the specification at page 16, paragraph [0050], as well as in Fig. 1, Fig. 2, Fig. 3, Fig. 4, and Fig. 5. Thus, it is respectfully submitted that the rejection of present claim 4 under 35 U.S.C. 112, first paragraph is not properly applied. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

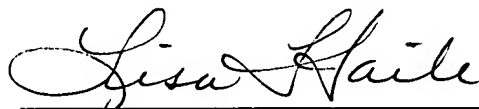
**CONCLUSION**

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

Respectfully submitted,

Date:

11/17/03



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